

```

MA→B [ω1_, Q1_] // MB→C [ω2_, Q2_] := Module[ {ζA, zC, E1, F1, G1, E2, F2, G2, I},
  ζA = Table[ζi, {i, A}]; zC = Table[zi, {i, C}]; I = IdentityMatrix@Length@B;
  E1 = Table[∂ζi, zj Q1, {i, A}, {j, B}]; E2 = Table[∂ζi, zj Q2, {i, B}, {j, C}];
  F1 = Table[∂ζi, ζj Q1, {i, A}, {j, A}]; F2 = Table[∂ζi, ζj Q2, {i, B}, {j, B}];
  G1 = Table[∂zi, zj Q1, {i, B}, {j, B}]; G2 = Table[∂zi, zj Q2, {i, C}, {j, C}];
  Expand /@ MA→C [ω1 ω2 Det[I - F2.G1]-1, ζA.E1.Inverse[I - F2.G1].E2.zC
    +  $\frac{1}{2}$  ζA. (F1 + E1.F2.Inverse[I - G1.F2].E1T).ζA +  $\frac{1}{2}$  zC. (G2 + E2T.G1.Inverse[I - F2.G1].E2).zC ] ]

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